

Opinion Pieces

From humanities to metahumanities: transhumanism and the future of education

Poppy Frances Gibson
University of Greenwich

Abstract

Educational policy and provision is ever-changing; but how does pedagogy need to adapt to respond to transhumanism? This opinion piece discusses transhumanism, questions what it will mean to be posthuman, and considers the implications of this on the future of education. This piece aims to identify some key questions in the area of transhumanism and education as four themes are considered: teachers, human hardware, curriculum and lifelong learning.

Keywords: transhumanism, biotechnology, pedagogy, social futurist, posthuman.

Introduction

When I tell people I am a transhumanist, it often raises an eyebrow – or several questions. What is transhumanism? What is a ‘posthuman’? Why would anyone want to live forever? This article will briefly respond to these questions (amongst others) and consider what this may mean for the education sector. Key questions will be identified in the area of transhumanism and education as four themes are considered: teachers, human hardware, curriculum and lifelong learning. With ‘trans’ meaning ‘across’, **transhumanism** is a ‘techno-progressive’ socio-political and intellectual movement (Porter, 2017) that involves transforming our primitive human selves into selves enhanced through technology. Transhumanism aims to develop our physical, emotional and cognitive capacities and thus to open up new possibilities and horizons of experience (Thompson, 2017). The end goal is one day to become ‘posthuman’: combating ageing and freeing ourselves from current biological limitations.

Human to posthuman, the transhuman journey

This may sound like science fiction, although many recent articles show the increasing potential and utilisation of Artificial Intelligence (AI) in our daily lives (Agrawal *et al.*, 2018; Fahimi and Powell, 2018; LaPlante and White, 2018). Recently, I watched the film adaptation of ‘Ghost in the Shell’, based on the famous Japanese seinen manga series, where a human brain is implanted into a robotic body. In reality, several breakthroughs in the partnership between neuroscience and biotechnology suggest that this could one day be achievable. Why should we not want to improve ourselves – and our society – with the tools we have to create positive social change?

Unsurprisingly, the movement of transhumanism originated in Silicon Valley, California, renowned for being a hub of high-tech innovation and development. Transhumanists claim common ground with several esteemed thinkers and traditions, from the ancient philosophy of Plato and Aristotle to the postmodern philosophy of Nietzsche (Porter, 2017) whilst current ideologies sit with the developments of science.

Transhumanism is driven by innovations in the health-care sector, increasing machine intelligence and the military (Benedikter and Siepmann, 2016), merging man and machine. Transhumanist political parties will play a role in the key policy decisions of the coming years – the start of this year saw the founding of the Transhumanist Party UK – but how will changes like these influence the cultural currency of pedagogy? What does transhumanism mean for the future of education?

From humanities to metahumanities: the changing face of education

As we begin to augment ourselves with technology, humanities will need to be transformed into metahumanities (Sorgner, 2015). Technology will enhance both our physiology and our intellectual ability. When knowledge can be accessed literally through the blink of an eye (wearing an augmented reality contact lens) what is there left to teach?

The face of education has already been responding to technological changes in recent years, such as the use of tablets and smartboards in the classroom, electronic submissions of assignments through software like 'Turnitin' and hosting online learning platforms like Moodle, where students can access course materials and communicate with their peers and tutors. The new Primary Curriculum in 2014 saw a shift from teachers as the transmitters of facts, to scaffolders of a more child-centred pedagogy, aiming to build problem-solving skills, develop resilience and encourage creativity. Let's consider how some other elements of education may change to enhance students' capabilities by means of biotechnology:

Teachers: In Japan, the world's first robot teacher, 'Saya', is now an accepted part of school culture; this is the first step, I believe, into moving to either robotic or virtual teaching. Perhaps one day our brains will be able to link to an online network and download data directly? The key question that this possibility raises is: What, essentially, is the role of a teacher? If a teacher is simply to pass on knowledge along the information journey, this can be achieved through AI. However, if a teacher is needed to be a mentor or a coach and, if nurturing of a student's academic and personal potential if required, I argue that until AI is advanced enough to respond to subtle emotional triggers, such as to pick up on a student's mood or discreet body language, it is not a suitable replacement for the human touch, especially in the light of current concerns about unprecedented highs in student mental health issues. (Evans *et al.*, 2018).

Human hardware: 'Neuromorphic' hardware is being developed in the quest to create machines that can function as closely as possible to the human brain. The pioneering 'Brainet' project, revealed last year, streams brainwaves onto the internet, which means that the human brain can be converted to an 'Internet of Things' (IoT) device on the World Wide Web; IoT refers to connecting any device with an on-and-off switch to the internet (Wits University, 2017). Brainet is a new frontier in brain-computer interface systems (Pantanowitz, 2017) which allows brain signals to be read on a device using the technique known as electroencephalography (EEG). The vision for the future is for programming to become sufficiently advanced for interactivity to be possible, and for electrical signals to be sent both ways, namely back from a device directly into the human brain. This process is not yet achievable, as the human brain is a very different processor from that of a computer (Andrews, 2017) and the data conversion process is still incompatible. Whilst digital computers use the binary signals of ones and zeros, our human brains send out signals composed of several billion bioelectrochemical transmissions. Should such a conversion one

day be possible, I speculate that we would no longer see academics queuing at the departmental printer/photocopier when students can download data virtually.

Curriculum: I believe that, in the future, we shall see the removal of a school curriculum, and of subjects, and the time thus saved used instead for developments of further innovations. Some critics of technology fear that robots may one day overpower humans (Sasi, 2017); in the battle to stay ahead of AI, will our studies turn to the necessary developments in engineering?

The prediction that robots will, over the next decade, take over thirty-five percent of jobs through automated systems (Sasi, 2017) should influence our planning for future curriculum provision at primary, secondary and further and higher levels. We need to evaluate which jobs can be automated and thus which skills will become redundant. We need to consider which jobs AI robots will not be able to do – or at least will take longer to be able to master – and prepare students to take on these roles; essentially, roles which involve moral judgement, such as law, or professional roles which can support mental wellbeing, such as counsellors, psychotherapists and coaches.

Lifelong learning: Henriksen (2015) argues that it is our finite condition that makes us human. I argue, **why should we be finite when we can be infinite?** Transhumanism suggests that human life will be better and even fulfilled in a new way, if humans can overcome some of the finite conditions now given (Henriksen, 2015). Although some critics of posthumanism posit that is the fragility of our mortal life that promotes the deeper meaning of our existence, I suggest that becoming posthuman would allow for freedom from daily worries and more energy to be put into, for example, positive relationships, higher-order thinking and innovation. We would need to review the real implication of 'lifelong skills' rather than skills just to get a job to pay the daily bills until retirement.

In my opinion, being human transcends our mortal skin. It isn't about how much of us is flesh and how much is synthetic. We continually strive for newer models of devices, the latest upgrades of apps; it is common sense that we should aim to develop ourselves into faster, smarter, better-connected beings. Only time will tell how the journey to posthumanism unravels but, as and when it does, we must see our society develop along with it, and that includes our institutions, public services... and even our universities.

Moodle implant, anyone?

Reference list

Agrawal, A., Gans, J. and Goldfarb, A. (2018) 'Artificial Intelligence in The Boardroom.' *Corporate Board*, 229,16-20. Business Source Premier, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=5&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008> (Accessed: 1 July 2018).

Andrews, R. (2017) 'Scientists Connect A Human Brain to The Internet for The First Time.'

IFLSCIENCE! Available at <http://www.iflscience.com/brain/scientists-connect-human-brain-internet-first-time/> (Accessed: 1 May 2018).

Benedikter, R., and Siepmann, K. (2016) 'Transhumanism: A New Global Political Trend?' *Challenge*, 59(1), 47-59. Business Source Premier, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=8&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008> (Accessed: 14 February 2018).

Evans, T.M., Bira, L., Beltran Gastelum, J., Weiss, T. and Vanderford, N.L. (2018) 'Evidence for a mental health crisis in graduate education.' *Nature Biotechnology*, 36(3), March 2018. Available at: <http://web.a.ebscohost.com/ehost/detail/detail?vid=10&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=29509732&db=cmedm> (Accessed: 12 May 2018).

Fahimi, S. and Powell, R. (2018) 'AI-Enabled Retail: Artificial intelligence enabled solutions, powered by machine learning, are poised to deliver unprecedented insights and create a new retail paradigm.' *Retail Merchandiser*, 58(2), 74-75. Business Source Premier, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=13&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008> (Accessed: 1 July 2018).

Henriksen, J. (2015) 'Is a Finite Life Such a Bad Idea? Transhumanism and Theological Anthropology.' *Dialog: A Journal of Theology*, 54(3), 280-288, Academic Search Premier, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=17&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008> (Accessed: 15 February 2018).

LaPlante, B. and White, K. (2018) 'Artificial intelligence.' *Washington Post*, 4. Regional Business News, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/detail/detail?vid=26&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=wapo.76c35408-4959-11e8-827e-190efaf1f1ee&db=bwh> (Accessed: 1 July 2018).

Porter, A. (2017) 'Bioethics and Transhumanism.' *Journal of Medicine & Philosophy*, 42(3), 237-260, Humanities International Complete, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=29&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008> (Accessed: 14 February 2018).

Sasi, R. (2017) 'Will Artificial Intelligence overpower humans.' Available at: <https://www.linkedin.com/pulse/artificial-intelligence-overpower-humans-rahul-sasi/> (Accessed: 1 July 2018).

Sorgner, S.L. (2015) 'The Future of Education: Genetic Enhancement and Metahumanities.' *Journal of Evolution & Technology*, 25(1) 31-48. Academic Search Premier, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/detail/detail?vid=21&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=103251705&db=aph> (Accessed: 13 February 2018).

Thompson, J. (2017) 'Transhumanism: How Far Is Too Far?' *New Bioethics*, 23(2), 165-182, Academic Search Premier, EBSCOhost. Available at: <http://web.a.ebscohost.com/ehost/detail/detail?vid=23&sid=ce3f2fd1-6c44-4ac1-a9cd-741a03cded90%40sessionmgr4008&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=28683597&db=cmedm> (Accessed: 14 February 2018).

Wits University (2017) 'Biomedical engineers connecting a human brain to the internet in real time.' *Medical Press*. Available at: <https://medicalxpress.com/news/2017-09-biomedical-human-brain-internet-real.html> (Accessed: 1 June 2018).